

In re Application of
Frank D. Husson, Jr.
Application No. 10/039,277
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Atty. Dkt. No. SOLAR1120-3
(051264-0306)

REMARKS

In accordance with the present invention, there is provided a simple, inexpensive and portable apparatus for heating and pasteurizing liquids, as well as methods using same. The simple and portable design is useful for providing a renewable supply of drinking water. Moreover, invention apparatus is relatively inexpensive to manufacture, is trouble free and reliable in use, and may be readily collapsed and folded for storage or transport.

In one aspect, invention solar water heaters comprise a one-piece device comprising a container, at least one energy converting structure for collecting solar energy and imparting it to water within the container, and sufficient insulation to minimize heat loss to surfaces that may be in contact with the container, thereby enabling one to achieve water temperatures of at least 60°C. Solar water heaters according to the present invention are thus capable of pasteurizing water by heating the liquid contained therein to temperatures of at least 60°C.

By the present communication, claims 1, 32, and 36 have been amended, and new claims 54-56 have been added, to define Applicant's invention with greater particularity. No new matter has been introduced by the subject amendments as all amended and new claim language is fully supported by the specification and original claims.

The rejection of claims 1, 3-7, 9, 12, 13, 16, 22, 43, 46 and 48 under 35 U.S.C. 102(b) as allegedly being anticipated by Billingham, International Publication No. WO86/07627 (1986) is respectfully traversed. Applicant's invention, as defined for example, by claim 1, distinguishes over Billingham by requiring a one-piece solar water heater, i.e., a container with an energy converting structure and an insulation structure which are both an integral part of the container. Billingham does not disclose or suggest such a solar heater. Instead, Billingham describes a solar heating mat containing two separate components, i.e., a removable inner tube and separate insulation members.

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The rejection of claims 1-13, 16-43 and 45-53 under 35 U.S.C. 103(a) as allegedly being unpatentable over Luboschik et al. (D.E. 2851793, 1980) in view of Billingham, is respectfully traversed. Applicant's invention, as defined, for example, by claim 1, distinguishes over the art by requiring a solar water heater capable of achieving water temperatures of at least 60°C, i.e., temperatures sufficient to pasteurize water. Luboschik does not disclose or suggest such a solar water heater. Indeed, the Luboschik device is not capable of achieving temperatures necessary to accomplish pasteurization in a reasonable amount of time. Moreover, the materials used by Luboschik are not compatible with production of potable water.

Further reliance on Billingham is unable to cure the deficiencies of Luboschik. While Luboschik is directed to a solar shower (for which temperatures less than about 55°C are suitable), Billingham contemplates temperatures as high as 75°C (see page 11, main paragraph), clearly much too high for the purposes contemplated by Luboschik. Accordingly, combination of these two references is clearly improper.

Moreover, if combination of these references was actually obvious, why has no one else done so in the more than 15 years since these two references were first publicly available? The discussion in the paragraph bridging pages 4-5 of the Office Action clearly addresses this question. Note the numerous modifications acknowledged by the Examiner to be required to convert the prior art devices to the invention device. It is clearly only with improper hindsight, having benefit of Applicant's disclosure, that these required modifications can be identified. Clearly, absent Applicant's disclosure, there is no motivation to combine the asserted references; even if there was such motivation, there is no guidance as to which features one should pick and choose from the prior art to arrive at Applicant's invention. Accordingly, reconsideration and withdrawal of the rejection over Luboschik in view of Billingham are respectfully requested.

The rejection of claims 14, 15 and 44 under 35 U.S.C. 103(a) as allegedly being unpatentable over Luboschik in view of Billingham, as applied to claims 1 and 43 above,

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and further in view of Holmsy, et al., U.S. Pat. No. 4,243,021 (1981) or Posnansky, U.S. Pat. No. 4,196,721 (1980), is respectfully traversed. As discussed above, the combination of Luboschik and Billingham is unable to render obvious the present invention. Further reliance on Holmsy, et al. or Posnansky is unable to cure the deficiencies of the combination of Luboschik and Billingham. Neither Holmsy, et al., nor Posnansky disclose or suggest a one-piece solar water heater as required by the present claims. The Examiner's reliance on these references for the mere disclosure, in a very different context, of a single feature which may be similar to a feature of the claimed solar water heater, is clear evidence of the improper hindsight with which these references have been applied to the present claims. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

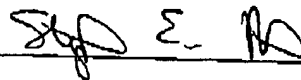
In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any issues remain to be resolved in view of this communication, the Examiner is invited to contact the undersigned at the number given below so that a prompt disposition of this application can be achieved.

Respectfully submitted,

Date

2/13/03

By



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